

# ZHUFAN GU

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## EDUCATION

- **Trine University, Phoenix, AZ | *Master of Science in Information Studies*** **May 2025 – May 2027**
  - Relevant Coursework: Advanced Database, Systems Engineering Analysis
- **Santa Clara University, Santa Clara, CA | *Master in Computer Science and Engineering*** **Sep 2022 – Dec 2025**
  - Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Networks
- **University of St. Andrews, St. Andrews, UK | *Master in Human Computer Interaction*** **Sep 2019 – Dec 2020**
  - Relevant Coursework: User-Centered Interaction Design, Information Visualization

## EXPERIENCE

- **CodeDay Labs | Software Engineer Intern** **Jun 2024 – Aug 2024**
  - Accelerated algebraic expressions by applying advanced symbolic computation within a computer algebra system, working in partnership with a Carnegie Mellon University mentor.
  - Authored **unit tests** in the **Rust** codebase to ensure correctness of simplification functions. ([pull request](#))
  - Implemented **Python bindings** with **PyO3**, enabling Rust functions to be utilized for more complex and large-scale computations in Python. ([pull request](#))
  - Mastered a new technology stack including **Rust**, **Maturin**, **Cargo**, **Z3**, and **EGG** within 4 weeks and constructed a [system diagram](#) to visualize the control flow.

## PROJECTS

- **Pantry AI | Full-stack Development** **Sep 2025 – Oct 2025**
  - Launched a full-stack **multimodal AI app** that turns text and ingredient photos into recipes, with ingredient recognition and recipe image generation.
  - Engineered backend in Python with **FastAPI** and **REST API**, consumed by a frontend built with **Next.js** and **TypeScript**.
  - Designed a multi-step workflow with interactive chat, intent recognition, and error handling for reliable user flows.
  - Deployed on **AWS Amplify** and **EC2**.
- **AppliTrack | Full-stack Development** **Sep 2023 – Nov 2023**
  - Engineered a full-stack job tracking application using the **MERN** stack (**MongoDB**, **Express.js**, **React**, **Node.js**) , implementing secure user management with **JWT authentication** and role-based access control.
  - Constructed a responsive React front-end with features including server-side search, filtering, and pagination, utilizing **React Router actions and loaders** for handling form submissions and data fetching.
  - Leveraged **TanStack Query** to manage server state and keep UI data consistent, and created a statistical dashboard with data visualizations using **Recharts**.

## OPEN SOURCE EXPERIENCE

- **React-PDF** (9.5k stars)
  - Elevated accessibility from 96 to 100 by investigating aria- labels for PDF page annotation links, addressing issues identified by Google Lighthouse.
- **Open Energy Dashboard**
  - Implemented automated tests using **Mocha**, **Docker**, and **PostgreSQL** data, ensuring precision and reliability in the open-source project *Open Energy Dashboard's* energy data systems. ([pull request](#))

## SKILLS

**Languages:** Python, JavaScript/TypeScript, HTML/CSS, Java, Rust, C++  
**Frameworks & Libraries:** React/Next.js, FastAPI, Node.js, Express.js  
**Databases:** MongoDB, SQL  
**Developer Tools:** Docker, Git, Vercel, Render, Cursor, GitHub Copilot, Jira

## HONORS AND REWARDS

- Excellent Graduates of Zhejiang Province
- Zhejiang Government Scholarship (Top 3%)